

## **REMARKS**

The Office Action mailed May 17, 2006 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested.

### **Claim Objections**

Claims 16 and 22 were objected to because of the improper dependency of claim 16 and because in line 12 of Claim 22, “connector” should be changed to “connection”. These issues have been addressed and the objection should be withdrawn.

### **Claim Rejections – 35 USC § 103**

Claims 1, 3, 5, 7 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Hanawa et al. (5,890,077; hereinafter, “Hanawa”) in view of Cornforth et al. (5,276,918; hereinafter, “Cornforth”). **Presumably the intent of the Office Action is a 35 U.S.C. § 103(a) obviousness rejection, since two references cannot be combined to provide a basis for a 35 U.S.C. § 102(b) anticipation rejection.**

Claim 1 reads as follows:

1. A system comprising:  
a radio modem unit;  
an RF signal booster unit connectable to the radio modem unit through a single connection line by way of which radio communication between the radio modem unit and RF signal booster occurs; and  
auto-detect logic configured to detect a DC offset on said single connection line, said DC offset being indicative of a connection of the radio modem unit to the RF signal booster unit.

Claim 1 thus recites *a single connection line* between the radio modem and the booster. The single connection line serves two purposes: 1) It carries radio communication between the radio modem and the booster, and 2) it carries a detectable DC offset that indicates that the

booster is connected to the radio modem. Such a single connection line is not disclosed in Hanawa. Hanawa discloses a connector (27, 57, 97) and explains that communication between the telephone and booster is by way of the connector. Hanawa also explains that this communication occurs when a connection between the telephone and booster exists, and, in FIG. 7, shows an example of a connection detection circuit 96. However, none of these features read on claim 1, which, as stated above, recites a single connection line that serves the dual purpose of 1) carrying radio communication between a radio modem and a booster, and 2) carrying a detectable DC offset that indicates that the booster is connected to the radio modem. This is true even if, arguendo, the contention in the Office Action that the dedicated voltage shorting mechanism of detection circuit 96 of Hanawa is equivalent to the claimed DC offset is accepted. In Hanawa, the detection circuit 96, along with any discussion of detecting a connection of the booster to the telephone, are separate and distinct from the communication between the telephone and booster, *and there is never any teaching or suggestion of combining them over a single connection line in the manner of the present invention*. Applicants respectfully request that the Office point to a particular passage or description in Hanawa that shows a single connection line that serves the dual purposes of 1) carrying radio communication between a radio modem and a booster, and 2) carrying a detectable DC offset that indicates that the booster is connected to the radio modem. Such a teaching or suggestion simply does not exist, and even in the case where a single *connector*, as in the connectors 27 and 57 (to be distinguished from a single *connection line*) is shown, multiple connection lines are shown and these are for communication purposes, not for the purpose of carrying a DC offset in the manner claimed. In the case of connector 97, again multiple lines are shown, and these are both exclusively for grounding the transistor Q using shorting circuit 98 in connection detector 96.

The Office Action continues to contend that the dedicated voltage shorting mechanism of detection circuit 96 of Hanawa is equivalent to the claimed DC offset. Applicants respectfully disagree. A DC offset in its ordinary and accustomed meaning is a deviation from some expected voltage value, and is not customarily used to characterized a short/open circuit. According to the Oxford English Dictionary, an offset in general is “A small fixed alteration or adjustment of some aspect of a system; *spec.* a small bias introduced to ensure correct operation

of an electrical circuit. Also: a sustained deviation or discrepancy between the actual and predicted value of a variable; *spec.* a small deviation from a correct or normal voltage, current, etc.” These definitions are inconsistent with the shorting mechanism provided in the detection circuit 96 of Hanawa. Therefore not only does Hanawa fail to teach or suggest a single connection line that serves the dual purposes of 1) carrying radio communication between a radio modem and a booster, and 2) carrying a detectable DC offset that indicates that the booster is connected to the radio modem, but Hanawa also fails to teach or suggest the use of a DC offset on a connection line altogether. These shortcomings of Hanawa are not remedied by Cornforth, in which single connection line 25 is disclosed as carrying a detectable DC offset that indicates that the booster 3 is connected to the radio unit 1. Thus the combination of these two references, even if proper, would not result in or render obvious all the claimed features of claim 1. For these reasons at least, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection based on this combination be withdrawn.

Claims 3-7 depend from claim 1 and the withdrawal of the rejection thereof is respectfully requested for at least the same reasons.

Claims 8, 10 and 12 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Hanawa in view of Cornforth and in further view of Pehrsson et al. (US 6,615,059; hereinafter, “Pehrsson”). **Presumably the intent of the Office Action is a 35 U.S.C. § 103(a) obviousness rejection, since two references cannot be combined to provide a basis for a 35 U.S.C. § 102(b) anticipation rejection.**

Claim 8 recites similar features as claim 1. Specifically, claim 8 recites “a radio including a first DC offset circuit which comprises one of a pull-up or a pull-down circuit,” “an RF signal connector ... adapted to carry an RF signal and a DC offset,” and “a detector unit adapted to detect the DC offset to determine whether the connector is connected to a booster unit based on an interaction between the first DC offset circuit and a second DC offset circuit included in the booster unit and comprising the other of the pull-up or pull-down circuits.” These features are also absent from Hanawa and Cornforth, as an extrapolation of the above

discussion would clearly show, and Pehrsson does not remedy this shortcoming. Thus a the combination of Hanawa, Cornforth and Pehrsson, even if proper, would not result in or render obvious all the claimed features of claim 8. Claim 8, along with claims 10-12 dependent therefrom, is therefore patentable over these references.

Claims 13 and 22 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hanawa in view of Cornforth and further in view of Pehrsson.

Claim 13, from which claims 15-17 depend, recites “a single coaxial connection line adapted to transmit RF signals and a DC offset indicative of the presence of the booster unit.” As discussed above, this limitation, which also specifies that the connection line be coaxial, is neither taught nor suggested by the combination of Hanawa, Cornforth and Pehrsson.

From the above, it will appreciated that the combination of Hanawa, Cornforth and Pehrsson also fails to teach or suggest at least the following features of claim 22, from which claims 24-25 depend: “detecting a DC offset on the connection line to determine whether the booster unit is connected,” “transmitting baseband signals on the connection line from the radio modem to the booster unit,” and “transmitting an RF signal on the connector line from the radio modem to the booster unit.” For this reason at least, Applicants respectfully request that the rejection of claims 22 and 24-25 based on the combination of Hanawa, Cornforth and Pehrsson.

Claims 19 and 21 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Barber in view of Hanawa in view of Pehrsson. Claim 19 recites providing RF energy from a radio modem to a power amplifier in booster unit “by way of a single connection line adapted to further carry a DC offset indicative . . . of the presence of the booster unit.” As discussed above, Barber, Hanawa and Pehrsson fail to teach or suggest such a feature. Therefore, even if all three of these references were properly combinable, which Applicants do not concede, the invention of claim 19 (and claim 21 dependent therefrom) would not result.

**Conclusion**

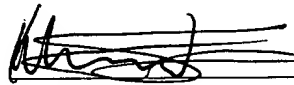
In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Amendment and/or Reply to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-1698.

Respectfully submitted,  
THELEN REID & PRIEST, L.L.P.

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Khaled Shami  
Reg. No. 38,745

Thelen Reid & Priest LLP  
P.O. Box 640640  
San Jose, CA 95164-0640  
Tel. (408) 282-1855  
Fax. (408) 287-8040